

Neurons, Networks, and Motor Behavior. Edited by Paul S.G. Stein, Sten Grillner, Allen I. Selverston and Douglas G. Stuart. MIT Press, Cambridge, MA. (1997). 305 pages. \$60.00.

Contents:

Series foreword. Preface. I. Selection and initiation of motor patterns. 1. Selection and initiation of motor behavior (Sten Grillner, Apostolos P. Georgopoulos and Larry M. Jordan). 2. The role of population coding in the control of movement (David L. Sparks, William B. Kristan, Jr. and Brian K. Shaw). 3. Neural substrates for initiation of startle responses (Roy E. Ritzmann and Robert C. Eaton).

II. Generation and formation of motor patterns: Cellular and systems properties. 4. Basic building blocks of vertebrate spinal central pattern generators (Ole Kiehn, Jørn Hounsgaard and Keith T. Sillar). 5. Neural and biomechanical control strategies for different forms of vertebrate Hindlimb motor tasks (Paul S.G. Stein and Judith L. Smith). 6. Spinal networks and sensory feedback in the control of undulatory swimming in lamprey (Peter Wallén). 7. Spinal networks controlling swimming in hatchling *Xenopus* tadpoles (Alan Roberts, Steve R. Soffe and Ray Perrins). 8. Role of ionic currents in the operation of motor circuits in the *Xenopus* embryo (Nicholas Dale). 9. Integration of cellular and network mechanisms in mammalian oscillatory motor circuits: Insights from the respiratory oscillator (Jeffrey C. Smith). 10. Shared features of invertebrate central pattern generators (Allen I. Selverston, Yuri V. Panchin, Yuri I. Arshavsky and Grigori N. Orlovsky). 11. Intrinsic membrane properties and synaptic mechanisms in motor rhythm generators (Ronald L. Calabrese and Jack L. Feldman). 12. Organization of neural networks for the control of posture and locomotion in an insect (Malcolm Burrows).

III. Generation and formation of motor patterns: Computational approaches. 13. How computation aids in understanding biological networks (Eve Marder, Nancy Kopell and Karen Sigvardt). 14. Dynamical systems analyses of real neuronal networks (John Guckenheimer and Peter Rowat). 15. Realistic modeling of burst generation and swimming in lamprey (Anders Lansner, Örjan Ekeberg and Sten Grillner). 16. Integrate-and-fire simulations of two molluscan neural circuits (William N. Frost, James R. Lieb, Jr., Mark J. Tunstall, Brett D. Mensh and Paul S. Katz).

IV. Modulation and reconfiguration. 17. Chemical modulation of vertebrate motor circuits (Keith T. Sillar, Ole Kiehn and Norio Kudo). 18. Modulation of neural circuits by steroid hormones in rodent and insect model systems (Janis C. Weeks and Bruce S. McEwen). 19. Chemical modulation of crustacean stomatogastric pattern generator networks (Ronald M. Harris-Warrick, Deborah J. Baro, Lisa M. Coniglio, Bruce R. Johnson, Robert M. Levini, Jack H. Peck and Bing Zhang). 20. Reconfiguration of the peripheral plant during various forms of feeding behaviors in the mollusc *Aplysia* (Irving Kupfermann, Vladimir Brezina, Elizabeth C. Cropper, Dillip Deodhar, William C. Probst, Steven C. Rosen, Ferdinand S. Vilim and Klaudiusz R. Weiss).

V. Short-term modulation of pattern-generating circuits. 21. Sensory modulation of pattern-generating circuits (Keir G. Pearson and Jan-Marino Ramirez). 22. Presynaptic mechanisms during rhythmic activity in vertebrates and invertebrates (Michael P. Nusbaum, Abdeljabbar El Manira, Jean-Pierre Gossard and Serge Rossignol).

VI. Sensory modification of motor output to control whole-body orientation. 23. Control of body orientation and equilibrium in vertebrates (Jane M. Macpherson, Tatiana G. Deliagina and Grigori N. Orlovsky). 24. Centrally patterned behavior generates sensory input for adaptive control (Mark A. Willis and Edmund A. Arbas). 25. Oculomotor control in insects: From muscles to elementary motion detectors (Nicholas J. Strausfeld). Contributors. Author index. Subject index.

Multimedia Technologies and Applications for the 21st Century: Visions of World Experts. Edited by Borko Furht. Kluwer Academic Publishers, Boston, MA. (1998). 323 pages. \$115.00, NLG 250.00, GBP 80.00.

Contents:

Preface. I. Multimedia processors. 1. Processor architectures for multimedia (Borko Furht). II. Multimedia servers. 2. DVDs: Much needed "shot in the arm" for video servers (Vijnan Shastri, P. Venkat Rangan and Srihari Sampath-Kumar). 3. Mitra: A scalable continuous media server (Shahram Ghandeharizadeh, Roger Zimmermann, Weifeng Shi, Reza Rejaie, Doug Ierardi and Ta-Wei Li). 4. Multimedia caching strategies for heterogeneous application and server environments (Asit Dan and Dinkar Sitaram). III. Multimedia databases. 5. Benchmarking multimedia databases (A. Desai Narasimhalu, Mohan S. Kankanhalli and Jiankang Wu). 6. Four promising multimedia databases and their embodiments (Y. Yaginuma, T. Yatabe, T. Satou, J. Tatemura and M. Sakauchi). 7. An annotation engine for supporting video database population (Marco Carrer, Leonardo Ligresti, Gulrukh Ahanger and Thomas D.C. Little). 8. Similarity as a geometer (Simone Santini and Ramesh Jain). IV. Multimedia networks. 9. Concepts for resource reservation in advance (Lars C. Wolf and Ralf Steinmetz). 10. Improving end system performance for multimedia applications over high bandwidth networks (S. Zeadally, G. Gheorghiu and A.F.J. Levi). V. Multimedia applications. 11. Multimedia applications development: Experiences (Nicolas D. Georganas). 12. Multimedia meets the Internet: Present and future (Michael Wynblatt, Dan Benson, Arding Hsu, Felix Bretschneider, Larry Schessel and Graham Howard). 13. Virtual sample processing: Extending the reach of multimedia (Vanu G. Bose, Andrew G. Chiu and David L. Tennenhouse. Index.

JavaTM Cryptography. By Jonathan Knudsen. O'Reilly, Sebastopol, CA. (1998). 344 pages. \$29.95.

Contents:

Preface. 1. Introduction. 2. Concepts. 3. Architecture. 4. Random numbers. 5. Key management. 6. Authentication. 7. Encryption. 8. Signed applets. 9. Writing a provider. 10. SafeTalk. 11. CipherMail. 12. Outside the box. Appendices. A. BigInteger. B. Base64. C. JAR. D. Javakey. E. Quick Reference. Index.